

Vapor Intrusion Study



Community Meeting



Grand Prairie, Texas
September 30, 2008

9797307

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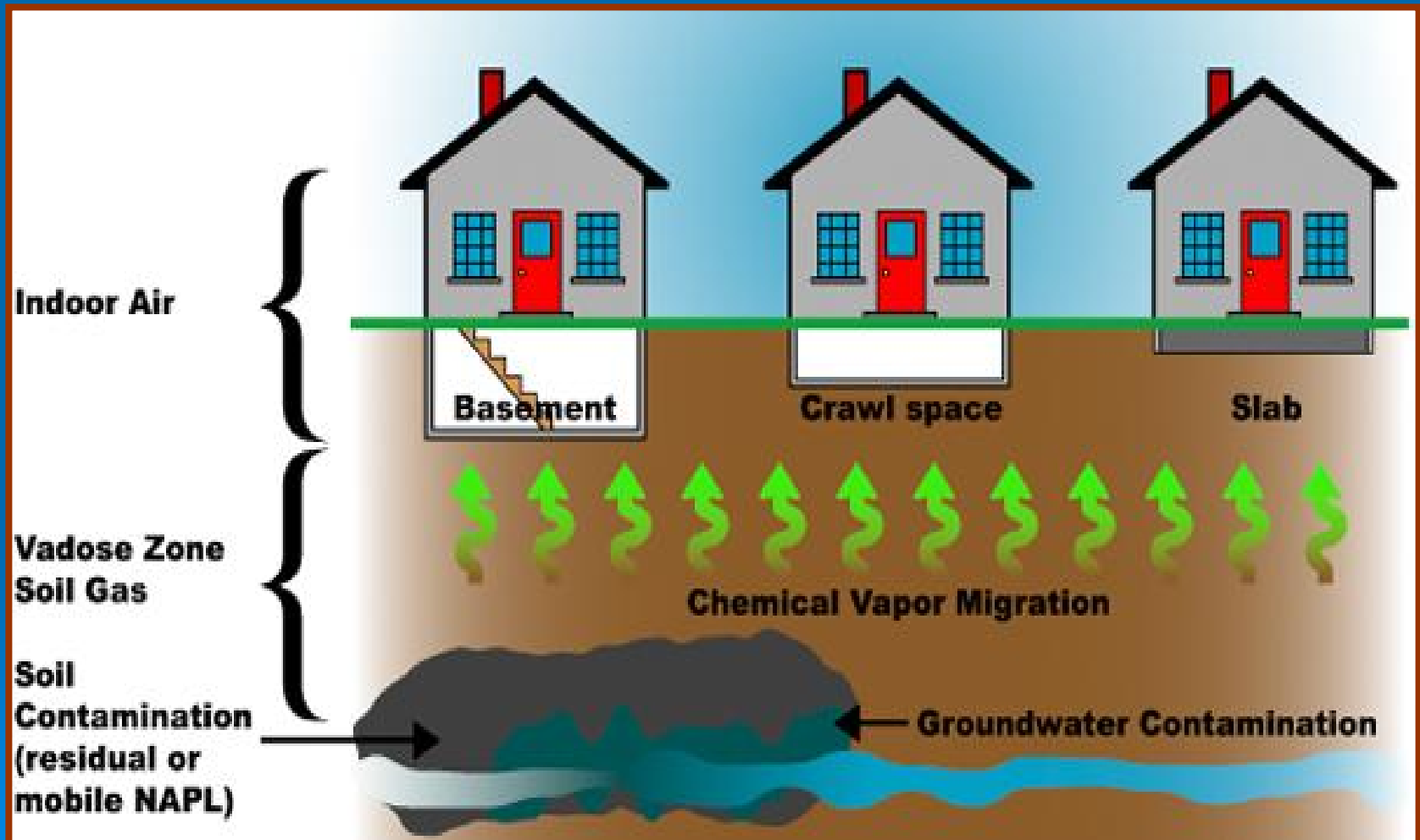
EPA Vapor Intrusion Study

- **Purpose**: to determine if vapors from shallow contaminated soils or groundwater can move up into indoor living areas.

- 4 Study Areas were selected:
 - Kelly AFB, San Antonio, TX;
 - Parker Solvents, Little Rock, AR;
 - England AFB, Alexandria, LA;
 - Delfasco Forge, Grand Prairie, TX



What is Vapor Intrusion?



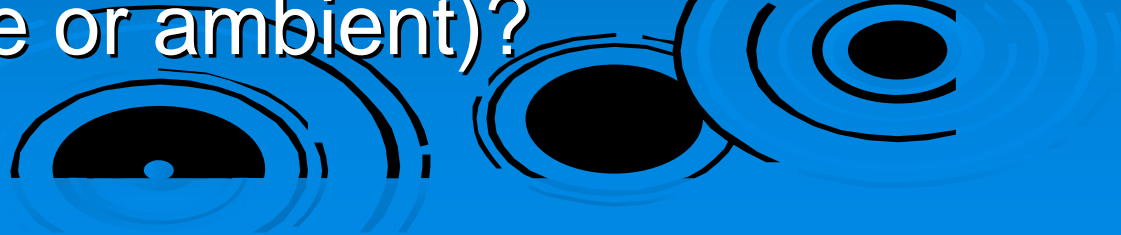
EPA Vapor Intrusion Study



Grand Prairie, TX
Phase 1 - May 2008

Questions We Were Trying To Answer

1. Does subsurface vapor exist below homes or commercial buildings (slab or crawlspace)?
2. If yes, is it entering homes or commercial buildings?
3. If it is found inside a home or commercial building, is it from contaminated soils or groundwater, or is it from another source (i.e., lifestyle or ambient)?



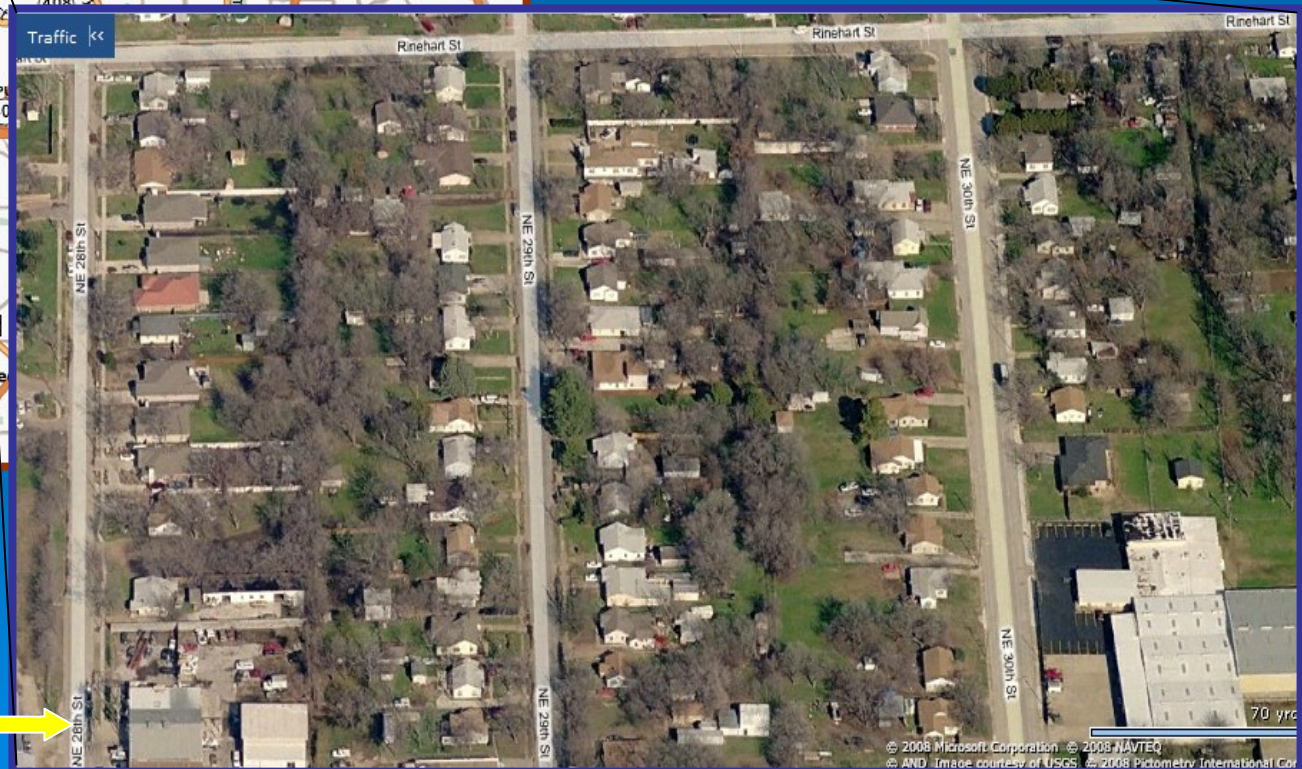
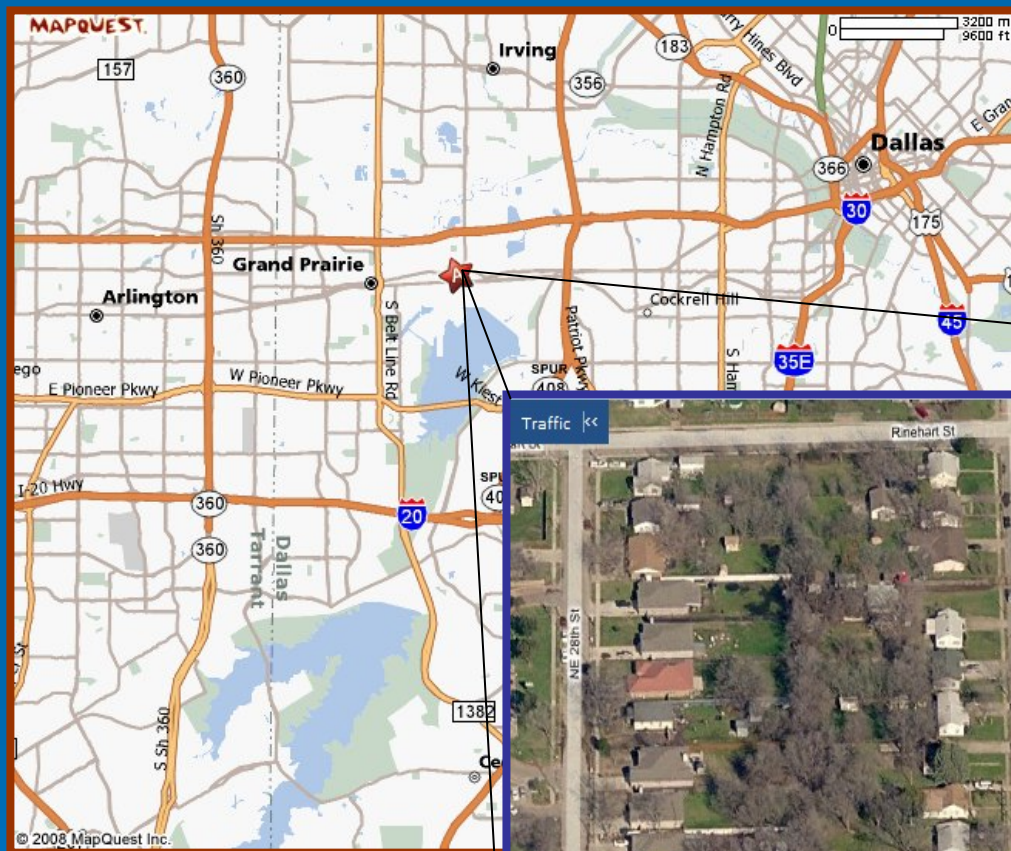


Site Background



- Groundwater and soil contamination were the result of releases of solvents from 50 years of historical metal forging and fabrication operations.
- TCE is the primary groundwater contaminant and was used to clean parts before delivery.

Neighborhood Study Area



Groundwater Plume

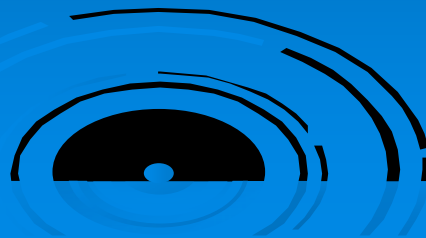
(b) (9)



Initial Neighborhood Sampling

May 19-23, 2008

- Sampling was limited to nearby homes and commercial buildings that overlie the groundwater plume.
- Sampling was not intended to test all of the homes that overlie contaminated groundwater in the area.



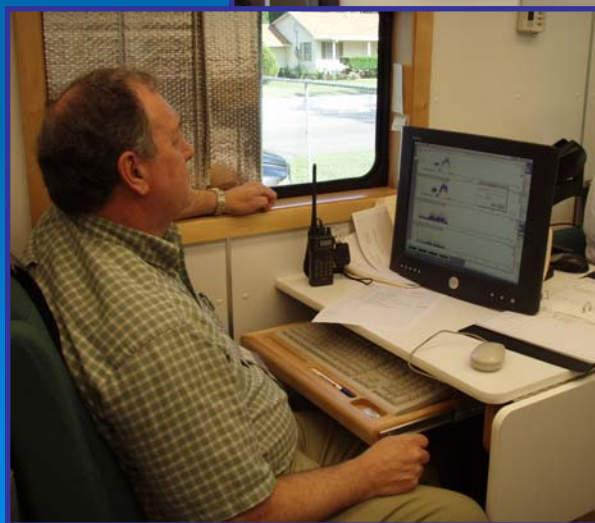
Initial Neighborhood Sampling (cont.)



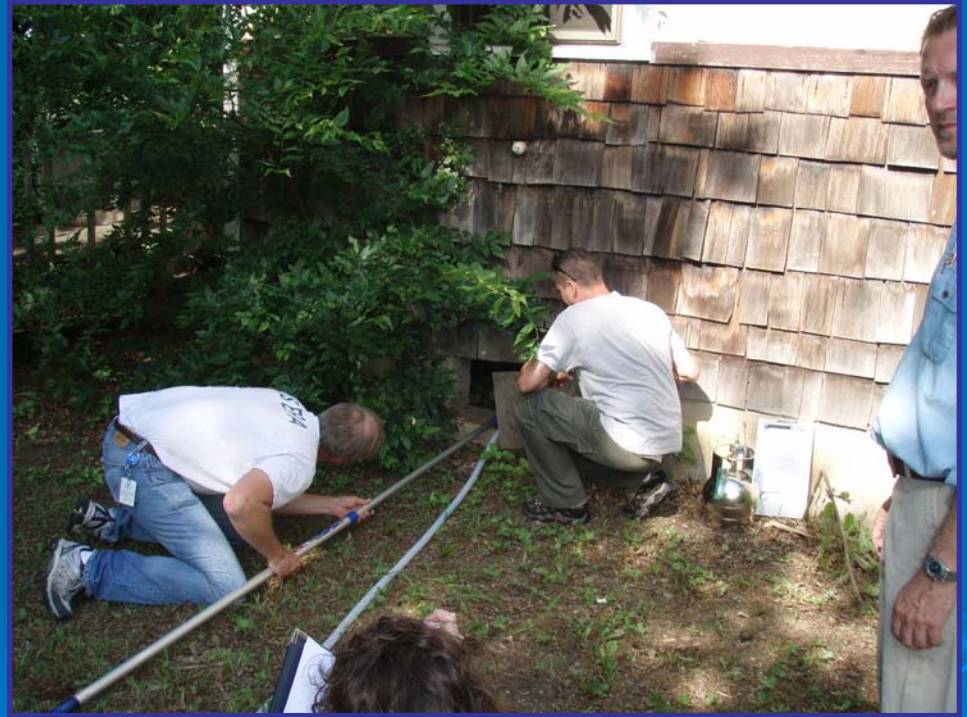
- Foundation / crawlspace soil vapor samples were collected from 16 homes and 2 commercial buildings.
- Results were provided to homeowners in early July. Results for each home will be kept private.

Trace Atmospheric Gas Analyzer (TAGA) Mobile Laboratory





Screen Crawlspace w/ TAGA





Place Summa Canisters Below Home Floor

Subslab Sampling Probe Installation



Subslab Sampling Probe Installation



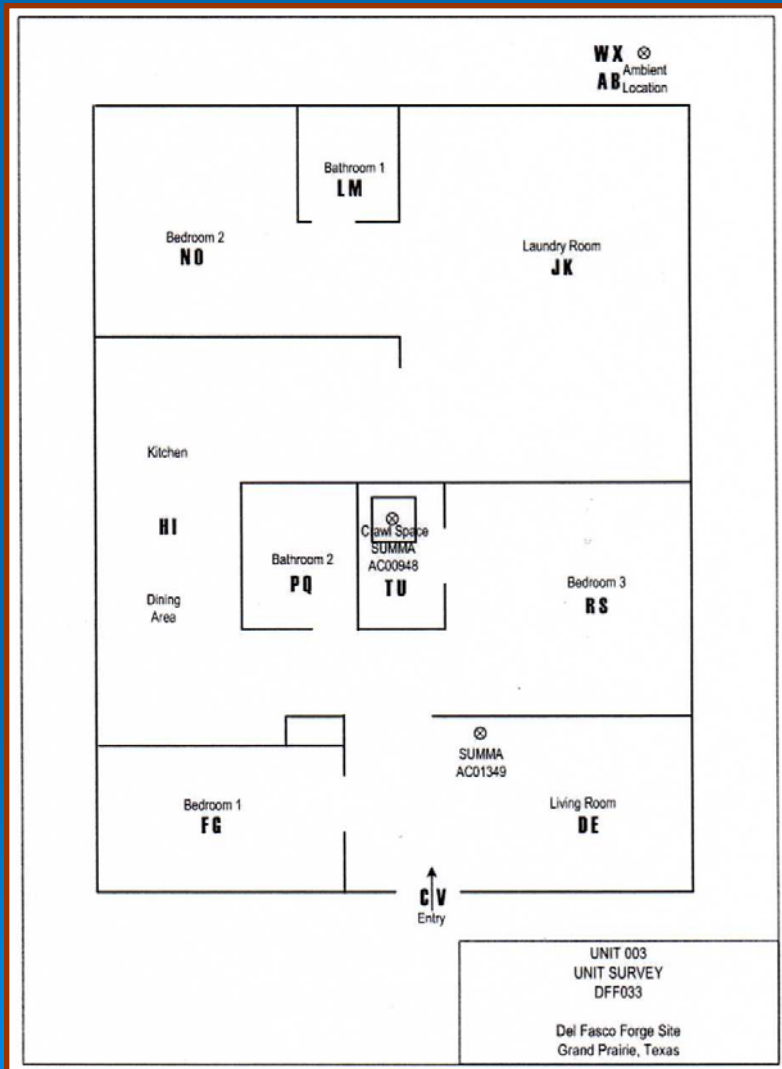
Sampling Subslab Ports





Other Potential Sources of Indoor Air Contamination

TAGA Monitoring for Indoor Air



TAGA Monitoring for Indoor Air

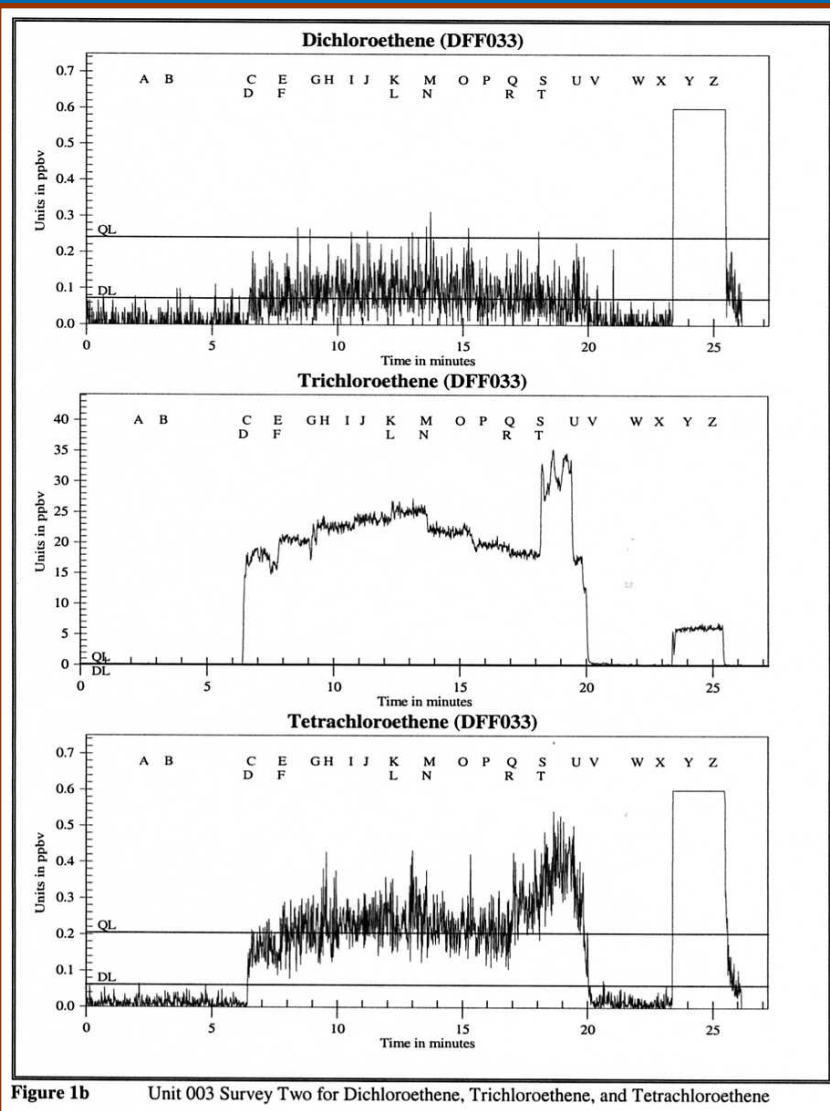


Figure 1b

TAGA File Event Summary
File: DFF033 Acquired on 22 May 2008 at 09:04:20
Title: Unit 003 Survey Two

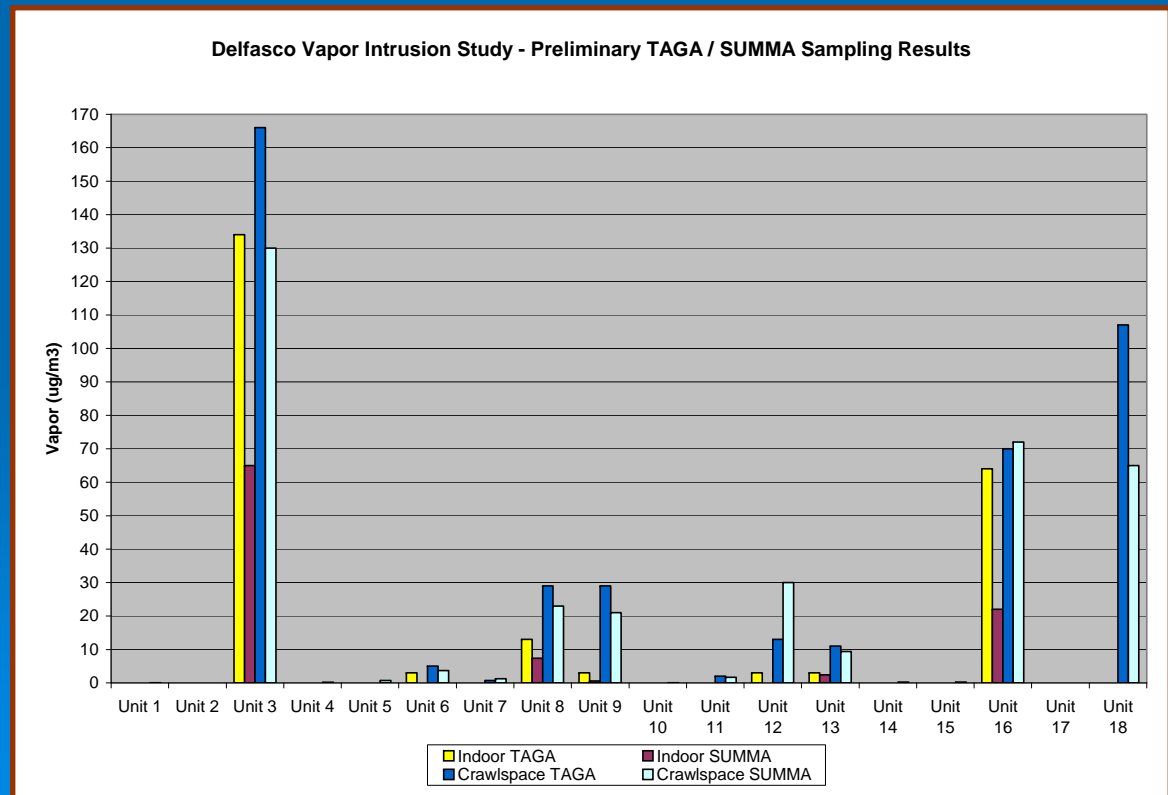
Flag	Offset Time	Offset Sequence	Description
A	2.1	149	Start of the pre-entry ambient
B	3.1	220	End of the pre-entry ambient
C	6.4	452	Entering the unit
D	6.6	470	Start of the living room
E	7.6	540	End of the living room
F	7.9	560	Start of bedroom one
G	8.9	632	End of bedroom one
H	9.4	669	Start of the kitchen/dining room
I	10.4	740	End of the kitchen/dining room
J	11.0	782	Start of the laundry room
K	12.0	853	End of the laundry room
L	12.4	878	Start of bathroom one
M	13.4	951	End of bathroom one
N	13.8	975	Start of bedroom two
O	14.8	1049	End of bedroom two
P	15.8	1117	Start of bathroom two
Q	16.8	1187	End of bathroom two
R	17.0	1207	Start of bedroom three
S	18.0	1277	End of bedroom three
T	18.3	1295	Start of the crawl space
U	19.3	1368	End of the crawl space
V	20.0	1419	Exiting the unit
W	21.7	1537	Start of the post-exit ambient
X	22.7	1606	End of the post-exit ambient
Y	23.8	1685	Start of the 30 mL/min spike
Z	24.8	1757	End of the 30 mL/min spike



Indoor & Outdoor Air Sampling

What We Found

- Of the 18 homes or businesses sampled for vapor, i.e., sub-slab, crawlspace or indoor air, 10 had detections 1 $\mu\text{g}/\text{m}^3$ or greater



Groundwater Plume

(b) (9)



Vapor Concentration “trend”



Ongoing and Future Activities

